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MICHAEL J. STRIKER  
103 EAST NECK ROAD  
HUNTINGTON, NY 11743

EXAMINER

HALL, COREY JOHN

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/563,392  
Filing Date: June 20, 2007  
Appellant(s): WORGULL ET AL.

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Michael J. Striker  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 8/1/2011 appealing from the Office action mailed 3/30/2011.

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**(1) Real Party in Interest**

The examiner has no comment on the statement, or lack of statement, identifying by name the real party in interest in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The following is a list of claims that are rejected and pending in the application:

Claims 3-6 and 9-14 are rejected and pending.

**(4) Status of Amendments After Final**

The examiner has no comment on the appellant's statement of the status of amendments after final rejection contained in the brief.

**(5) Summary of Claimed Subject Matter**

The examiner has no comment on the summary of claimed subject matter contained in the brief.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The examiner has no comment on the appellant's statement of the grounds of rejection to be reviewed on appeal. Every ground of rejection set forth in the Office action from which the appeal is taken (as modified by any advisory actions) is being maintained by the examiner except for the grounds of rejection (if any) listed under the subheading "WITHDRAWN

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REJECTIONS.” New grounds of rejection (if any) are provided under the subheading “NEW GROUNDS OF REJECTION.”

**(7) Claims Appendix**

The examiner has no comment on the copy of the appealed claims contained in the Appendix to the appellant’s brief.

**(8) Evidence Relied Upon**

4,232,454	Springer	11-1980
5,349,147	Gallone	9-1994
5,727,331	Thaler et al.	3-1998
4,711,988	Thaler et al.	12-1987
JP03009703 A	Kaeriyama	1-1991
4,676,260	Paulhus et al.	6-1987
3,612,824	Berryman et al.	10-1971

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

***Claim Rejections - 35 USC § 102***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 13 and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Springer (US Patent No. 4,232,454 previously cited).

Regarding claims 13 and 10, Springer discloses a hand hair dryer (100, fig. 2) comprising: an electric fan (103, fig. 2) located in a housing portion (101, fig. 2); a first handle

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grip (119, fig. 2) comprising operator control elements (117, 118, fig. 2) and connected to the housing portion (101, fig. 2); and a barrel portion (110, fig. 2) containing an electric heater (116, fig. 2) and connected to the housing portion (101, fig. 2) at an angle of approximately 90° with respect to said first handle grip (119, fig. 2) wherein: said electric heater (116, fig. 2) is located in line with said electric fan (103, fig. 2) for generating an air stream (fig. 2 showing an air stream with arrows) from said barrel portion (110, fig. 2); said barrel portion (110, fig. 2) is embodied as a second handle grip (fig. 2 showing the barrel portion 110 which is inherently capable of being used as a second handle grip and where this language is given little weight because it is functional language and the apparatus claim limitations read on the prior art) that is sufficiently insulated (fig. 2 showing doors 112 and 113 which would inherently insulate the barrel portion 110 from the heater 116 and where having the heating elements 120 of the heater 116 spaced from the barrel portion 110 would also inherently provide an insulating effect and where the barrel portion 110 having a thickness would also inherently provide an insulating effect and where sufficiently insulated is indefinite as stated above) from the heater (116, fig. 2) to prevent said second handle grip (110, fig. 2) from getting hot during use (where as stated above the hair dryer has insulating effects and where the heater can be deactivated which would also prevent the second handle grip from getting hot during use of the fan); a single cold air combination switch (117, fig. 2, col. 3, lines 22-23 describing the heater switch 117 as changing the heater wattage and col. 4, lines 6-10 describing switch 117 as being used to turn the heat on) is located only on the housing portion (101, fig. 2) between said first handle grip (119, fig. 2) and said barrel portion (110, fig. 2) at the angle formed by the first handle grip (119, fig. 2) and the barrel portion (110, fig. 2); and said cold air combination switch (117, fig. 2) is configured to be

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actuated selectively from the first (119, fig. 2) or second (110, fig. 2) handle grip (showing a cold air combination switch 117 at the claimed location on the housing 101 capable of being actuated from 119 and 110 and where this claim language is given little weight because it is functional language and the apparatus claim limitations read on the prior art), by direct contact between the cold air combination switch (117, fig. 2) and one finger of a hand (where it is implicit that a user of a hand held hair dryer would operate the switch 117 using one finger of a hand) on either the first handle grip (119, fig. 2) or the second (110, fig. 2) handle grip, and wherein the cold air combination switch (117, fig. 2) is a one-legged toggle switch (fig. 1 at 117 showing a one-legged toggle switch).

### ***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Springer (US Patent No. 4,232,454) as applied to claim 13 above, and further in view of Gallone (US Patent No. 5,349,147 previously cited).

In regards to claim 11, Springer discloses the claimed invention including a cold air combination switch (117, fig. 2), except for wherein the switch is a two-legged toggle switch. However, Gallone teaches wherein a switch (2, fig. 1) is a two-legged (15, fig. 1 showing two legs 15 of a toggle switch) toggle switch in order to provide a water-splash protected electric switch that can establish or break continuity between contacts within the switch casing (abstract, lines 1-12). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention was made to modify the Springer reference, to include wherein the switch is a two-

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legged toggle switch, as suggested and taught by Gallone, for the purpose of providing a water-splash protected electric switch that can establish or break continuity between contacts within the switch casing. The modification merely involves simply substituting one known element for another to obtain predictable results. One would be motivated to combine Springer with Gallone because Gallone teaches a two-legged toggle switch that provides a water-splash protected switch and Springer could be similarly improved by simply substituting its toggle switch for a two-legged toggle switch that provides a water-splash protected switch, thus preventing the user from electrical shock by the switch if water, for example from a sink, is splashed onto the switch.

Claims 13, 3-6, and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thaler et al. (US Patent No. 5,727,331 hereinafter Thaler '331 previously cited) in view of Thaler et al. (US Patent No. 4,711,988 hereinafter Thaler '988 previously cited) and further in view of Kaeriyama (JP 03 009 703 A previously cited).

Regarding claims 13, 3-6, and 9, Thaler '331 discloses a hand hair dryer (30, fig. 1) comprising: an electric fan ("a motor driven fan as a blower" col. 2, lines 34-40 describing a fan as incorporated by reference from Thaler '988) located in a housing portion (fig. 1 showing a housing portion connected to a first handle grip 11 and a barrel portion 10); a first handle grip (11, fig. 1) . . . and connected to the housing portion (fig. 1); and a barrel portion (10, fig. 1) containing an electric heater ("an electrical heater" col. 2, lines 34-40 describing a heater as incorporated by reference from Thaler '988) and connected to the housing portion (fig. 1) at an angle of approximately 90° (fig. 1 showing an angle of approximately 90°) with respect to said first handle grip (11, fig. 1) wherein: said electrical heater ("an electrical heater" col. 2, lines 34-40 describing a heater as incorporated by reference from Thaler '988 which shows in figure 1 a

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heater 14 in line with a fan means 12) is located in line (fig. 1 showing alignment 60) with said electric fan (“a motor driven fan as a blower” col. 2, lines 34-40 describing a fan as incorporated by reference from Thaler '988) for generating an air stream (fig. 4 showing an air stream from the barrel portion) from said barrel portion; said barrel portion (10, fig. 1) is embodied as a second handle grip (fig. 4) . . . ; a single cold air combination switch (20, fig. 1, col. 2, lines 34-49 describing the switch 20 as controlling the temperature as incorporated by reference from Thaler '988, figure 1 at 42) is located . . . on the housing portion (fig. 1 showing the switch 20 being partially on the housing portion) between said first handle grip (11, fig. 1) and said barrel portion (10, fig. 1) at the angle (fig. 1 showing the switch 20 at the angle) formed by the first handle grip (11, fig. 1) and the barrel portion (10, fig. 1); and said cold air combination switch (20, fig. 1) is configured to be actuated selectively from the first or second handle grip (11, 10, fig. 1 showing the switch 20 at the claimed location and capable of being actuated from 11 and 10 and where this claim language is given little weight because it is functional language and the apparatus claim limitations read on the prior art), by direct contact between the cold air combination switch (20, fig. 1) and one finger of a hand (where it is implicit that a user of a hand held hair dryer would operate the switch 20 using one finger of a hand and where figure 4 shows that a user's hand on the second handle grip would be very close to the switch 20 and could contact the switch directly with a thumb or index finger) on either the first handle grip (11, fig. 1) or the second handle grip (10, fig. 1), wherein the second handle grip (10, fig. 1) is shaped cylindrically (fig. 3 showing the second handle grip 10 being shaped cylindrically), and wherein the cold air combination switch (20, fig. 1) is a pushbutton (fig. 1 at 61 showing that the switch 20 is a pushbutton, col. 2, lines 53-59 describing the switch 20 moving in the direction of arrow 61),



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except for comprising operator control elements, that is sufficiently insulated from the heater to prevent said second handle grip from getting hot during use, only, wherein the barrel portion is heat-insulated from the outside, wherein the second handle grip and the barrel portion are embodied as heat-insulated from the outside, and wherein the first and second handle grips are each provided with a nonslip surface. However, Thaler '988 teaches comprising operator control elements (16, 18, fig. 1) in order to independently control the power and temperature (col. 2, lines 39-51). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention was made to modify the Thaler '331 in view of Thaler '988 reference, to include comprising operator control elements, as suggested and taught by Thaler '988, for the purpose of independently controlling the power and temperature. The modification merely involves combining prior art elements according to known methods to yield predictable results. One would be motivated to combine Thaler '331 with Thaler '988 because Thaler '988 provides additional control over both the power and the temperature and Thaler '331, which incorporates by reference Thaler '988, could be similarly improved by having similar operator control elements, thus providing greater control over the power and temperature of the hair dryer.

Kaeriyama teaches that is sufficiently insulated from a heater to prevent a second handle grip from getting hot during use (page 8, lines 8-24 describing achieving heat insulation by making the barrel portion with thicker walls to prevent the surface from having high temperatures), wherein a barrel portion is heat-insulated from the outside (page 8, lines 8-24 describing achieving heat insulation by making the barrel portion with thicker walls which is in contrast to an internal cold-air conduit), wherein a second handle grip and a barrel portion are embodied as heat-insulated from the outside (fig. 4 showing the entire barrel portion including

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the second handle grip portion being heat-insulated from the outside, page 8, lines 8-24), and wherein a first (5, fig. 2) and second (4, fig. 2) handle grips are each provided with a nonslip surface (fig. 2 showing antislip ribs on the first 5 and second 4 handle grips, “antislip rib 25” page 8, line 11) in order to provide greater heat insulation to the barrel portion (page 8, lines 8-24) and to prevent slipping (page 8, line 11) when gripping the hair dryer. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention was made to modify the Thaler ‘331 in view of Thaler ‘988 reference, to include that is sufficiently insulated from the heater to prevent said second handle grip from getting hot during use, wherein the barrel portion is heat-insulated from the outside, wherein the second handle grip and the barrel portion are embodied as heat-insulated from the outside, and wherein the first and second handle grips are each provided with a nonslip surface, as suggested and taught by Kaeriyama, for the purpose of providing greater heat insulation to the barrel portion and preventing slipping when gripping the hair dryer. The modification merely involves combining prior art elements according to known methods to yield predictable results. One would be motivated to combine Thaler ‘331 with Kaeriyama because Kaeriyama teaches that a hair dryer barrel portion can be cooler when grasped by having the barrel heat insulated and easier to grip by having nonslip surfaces and Thaler ‘331 could be similarly improved by having its barrel heat insulated and by having nonslip surfaces, thus making the barrel portion even cooler to better ensure that the user is not burned and to better ensure that the user can maintain a good grip on the hair dryer.

Thaler ‘331 in view of Thaler ‘988 and further in view of Kaeriyama discloses the claimed invention except for only. It would have been obvious to one having ordinary skill in the art at the time the invention was made to locate the single cold air combination switch (20,

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fig. 1) which is partially located on the housing (fig. 1) to be located only on the housing, for the purpose of providing more space on the first handle grip (11, fig. 1) for a more secure grip, since it has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japikse*, 86 USPQ 70.

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Thaler '331 (US Patent No. 5,727,331) in view of Thaler '988 (US Patent No. 4,711,988) and further in view of Kaeriyama (JP 03 009 703 A) as applied to claim 13 above, and further in view of Paulhus et al. (US Patent No. 4,676,260 previously cited).

In regards to claim 10, Thaler '331 in view of Thaler '988 and further in view of Kaeriyama discloses the claimed invention including a cold air combination switch (20, fig. 1), except for wherein the switch is a one-legged toggle switch. However, Paulhus et al. teaches a switch that is a one-legged toggle switch (20, fig. 1 showing a one-legged toggle heat switch 20 on the housing 12 of a hair dryer) in order to provide a switch in the proximity of a finger of the hand of the operator (col. 2, lines 11-15) and to provide a switch that can turn the heater on or off without having to be held in place by the operator. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention was made to modify the Thaler '331 in view of Thaler '988 and further in view of Kaeriyama reference, to include wherein the switch is a one-legged toggle switch, as suggested and taught by Paulhus et al., for the purpose of providing a switch in the proximity of a finger of the hand of the operator and providing a switch that can turn the heater on or off without having to be held in place by the operator. The modification merely involves simply substituting one known element for another to obtain predictable results. One would be motivated to combine Thaler '331 with Paulhus et al. because Paulhus et al.

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teaches a one-legged toggle heat switch that is close to a finger of the operator for greater ease in operation and does not require the operator to hold it in place and Thaler '331 could be similarly improved by simply substituting its switch for a one-legged toggle heat switch, thus providing a switch that can be operated with ease using a finger and avoiding finger fatigue by providing a switch that does not have to be held in place by the operator.

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Thaler '331 (US Patent No. 5,727,331) in view of Thaler '988 (US Patent No. 4,711,988) and further in view of Kaeriyama (JP 03 009 703 A) as applied to claim 13 above, and further in view of Gallone (US Patent No. 5,349,147).

In regards to claim 11, Thaler '331 in view of Thaler '988 and further in view of Kaeriyama discloses the claimed invention including a cold air combination switch (20, fig. 1), except for wherein the switch is a two-legged toggle switch. However, Gallone teaches wherein a switch (2, fig. 1) is a two-legged (15, fig. 1 showing two legs 15 of a toggle switch) toggle switch in order to provide a water-splash protected electric switch that can establish or break continuity between contacts within the switch casing (abstract, lines 1-12). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention was made to modify the Thaler '331 in view of Thaler '988 and further in view of Kaeriyama reference, to include wherein the switch is a two-legged toggle switch, as suggested and taught by Gallone, for the purpose of providing a water-splash protected electric switch that can establish or break continuity between contacts within the switch casing. The modification merely involves simply substituting one known element for another to obtain predictable results. One would be motivated to combine Thaler '331 with Gallone because Gallone teaches a two-legged toggle

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switch that provides a water-splash protected switch and Thaler '331 could be similarly improved by simply substituting its switch for a two-legged toggle switch that provides a water-splash protected switch, thus preventing the user from electrical shock by the switch if water, for example from a sink, is splashed onto the switch.

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Thaler '331 (US Patent No. 5,727,331) in view of Thaler '988 (US Patent No. 4,711,988) and further in view of Kaeriyama (JP 03 009 703 A) as applied to claim 13 above, and further in view of Berryman (US Patent No. 3,612,824 previously cited).

In regards to claim 12, Thaler '331 in view of Thaler '988 and further in view of Kaeriyama discloses the claimed invention, except for wherein: a centrally located warm-air conduit and a coaxial cold-air conduit are provided in the barrel portion; the central warm-air conduit is formed by a hollow-cylindrical barrel, in which the heater is located; the coaxial cold-air conduit is formed by the barrel portion and the hollow-cylindrical barrel; and the central warm-air conduit and the coaxial cold-air conduit are acted upon by a cold air stream of the fan and, by means of the heater, a warm air stream outlet is effected out of the central warm-air conduit, and a cold air stream outlet is effected from the coaxial cold-air conduit. However, Berryman teaches wherein: a centrally located warm-air conduit (fig. 3 at 97) and a coaxial cold-air conduit (74, fig. 3) are provided in a barrel portion (73, fig. 3); the central warm-air conduit (fig. 3 at 97) is formed by a hollow-cylindrical barrel (66, fig. 3), in which a heater (108, fig. 3) is located; the coaxial cold-air conduit (74, fig. 3) is formed by the barrel portion (73, fig. 3) and the hollow-cylindrical barrel (66, fig. 3); and the central warm-air conduit (fig. 3 at 97) and the coaxial cold-air conduit (74, fig. 3) are acted upon by a cold air stream of the fan (53, fig. 3) and,

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by means of the heater (108, fig. 3), a warm air stream outlet is effected out of the central warm-air conduit (fig. 3 at 97), and a cold air stream outlet is effected from the coaxial cold-air conduit (74, fig. 3) in order to prevent the user from being burned due to the heating of the barrel during extended use (col. 2, lines 59-65). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention was made to modify the Thaler '331 in view of Thaler '988 and further in view of Kaeriyama reference, to include wherein: a centrally located warm-air conduit and a coaxial cold-air conduit are provided in the barrel portion; the central warm-air conduit is formed by a hollow-cylindrical barrel, in which the heater is located; the coaxial cold-air conduit is formed by the barrel portion and the hollow-cylindrical barrel; and the central warm-air conduit and the coaxial cold-air conduit are acted upon by a cold air stream of the fan and, by means of the heater, a warm air stream outlet is effected out of the central warm-air conduit, and a cold air stream outlet is effected from the coaxial cold-air conduit, as suggested and taught by Berryman, for the purpose of preventing the user from being burned due to the heating of the barrel during extended use. The modification merely involves combining prior art elements according to known methods to yield predictable results. One would be motivated to combine Thaler '331 with Berryman because Berryman teaches a hair dryer that reduces the heating of the barrel by using a coaxial cold-air conduit to prevent the user from being burned and Thaler '331 could be similarly improved by having a similar barrel, thus better ensuring that the user is not burned by the barrel.

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Thaler '331 (US Patent No. 5,727,331) in view of Thaler '988 (US Patent No. 4,711,988) and further in view of Berryman (US Patent No. 3,612,824).

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Regarding claim 14, Thaler '331 discloses a hand hair dryer (30, fig. 1) comprising: an electric fan ("a motor driven fan as a blower" col. 2, lines 34-40 describing a fan as incorporated by reference from Thaler '988) located in a housing portion (fig. 1 showing a housing portion connected to a first handle grip 11 and a barrel portion 10); a first handle grip (11, fig. 1) . . . and connected to the housing portion (fig. 1); and a barrel portion (10, fig. 1) containing an electric heater ("an electrical heater" col. 2, lines 34-40 describing a heater as incorporated by reference from Thaler '988) and connected to the housing portion (fig. 1) at an angle of approximately 90° (fig. 1 showing an angle of approximately 90°) with respect to said first handle grip (11, fig. 1) wherein: said electric heater ("an electrical heater" col. 2, lines 34-40 describing a heater as incorporated by reference from Thaler '988 which shows in figure 1 a heater 14 in line with a fan means 12) is located in line (fig. 1 showing alignment 60) with said electric fan ("a motor driven fan as a blower" col. 2, lines 34-40 describing a fan as incorporated by reference from Thaler '988) for generating an air stream (fig. 4 showing an air stream from the barrel portion) from said barrel portion; said barrel portion (10, fig. 1) is embodied as a second handle grip (fig. 4); a single cold air combination switch (20, fig. 1, col. 2, lines 34-49 describing the switch 20 as controlling the temperature as incorporated by reference from Thaler '988, figure 1 at 42) is located . . . on the housing portion (fig. 1 showing the switch contacting the housing portion) between said first handle grip (11, fig. 1) and said barrel portion (10, fig. 1) at the angle (fig. 1 showing the switch 20 at the angle) formed by the first handle grip (11, fig. 1) and the barrel portion (10, fig. 1); said cold air combination switch (20, fig. 1) is configured to be actuated selectively from the first or second handle grip (11, 10, fig. 1 showing the switch 20 at the claimed location and capable of being actuated from 11 and 10 and where this claim language is

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given little weight because it is functional language and the apparatus claim limitations read on the prior art), by direct contact between the cold air combination switch (20, fig. 1) and one finger of a hand (where it is implicit that a user of a hand held hair dryer would operate the switch 20 using one finger of a hand and where figure 4 shows that a user's hand on the second handle grip would be very close to the switch 20 and could contact the switch directly with a thumb or index finger) on either the first handle grip (11, fig. 1) or the second handle grip (10, fig. 1); . . . , except for comprising operator control elements, only, a centrally located warm-air conduit and a coaxial cold-air conduit are provided in the barrel portion; the central warm-air conduit is formed by a hollow-cylindrical barrel, in which the heater is located; the coaxial cold-air conduit is formed by the barrel portion and the hollow-cylindrical barrel; and the central warm-air conduit and the coaxial cold-air conduit are acted upon by a cold air stream of the fan and, by means of the heater, a warm air stream outlet is effected out of the central warm-air conduit, and a cold air stream outlet is effected from the coaxial cold-air conduit. However, Thaler '988 teaches comprising operator control elements (16, 18, fig. 1) in order to independently control the power and temperature (col. 2, lines 39-51). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention was made to modify the Thaler '331 in view of Thaler '988 reference, to include comprising operator control elements, as suggested and taught by Thaler '988, for the purpose of independently controlling the power and temperature. The modification merely involves combining prior art elements according to known methods to yield predictable results. One would be motivated to combine Thaler '331 with Thaler '988 because Thaler '988 provides additional control over both the power and the temperature and Thaler '331, which incorporates by reference Thaler '988, could be similarly



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improved by having similar operator control elements, thus providing greater control over the power and temperature of the hair dryer.

Berryman teaches a centrally located warm-air conduit (fig. 3 at 97) and a coaxial cold-air conduit (74, fig. 3) are provided in a barrel portion (73, fig. 3); the central warm-air conduit (fig. 3 at 97) is formed by a hollow-cylindrical barrel (66, fig. 3), in which a heater (108, fig. 3) is located; the coaxial cold-air conduit (74, fig. 3) is formed by the barrel portion (73, fig. 3) and the hollow-cylindrical barrel (66, fig. 3); and the central warm-air conduit (fig. 3 at 97) and the coaxial cold-air conduit (74, fig. 3) are acted upon by a cold air stream of the fan (53, fig. 3) and, by means of the heater (108, fig. 3), a warm air stream outlet is effected out of the central warm-air conduit (fig. 3 at 97), and a cold air stream outlet is effected from the coaxial cold-air conduit (74, fig. 3) in order to prevent the user from being burned due to the heating of the barrel during extended use (col. 2, lines 59-65). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention was made to modify the Thaler '331 in view of Thaler '988 reference, to include a centrally located warm-air conduit and a coaxial cold-air conduit are provided in the barrel portion; the central warm-air conduit is formed by a hollow-cylindrical barrel, in which the heater is located; the coaxial cold-air conduit is formed by the barrel portion and the hollow-cylindrical barrel; and the central warm-air conduit and the coaxial cold-air conduit are acted upon by a cold air stream of the fan and, by means of the heater, a warm air stream outlet is effected out of the central warm-air conduit, and a cold air stream outlet is effected from the coaxial cold-air conduit, as suggested and taught by Berryman, for the purpose of preventing the user from being burned due to the heating of the barrel during extended use. The modification merely involves combining prior art elements according to known methods to

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yield predictable results. One would be motivated to combine Thaler '331 with Berryman because Berryman teaches a hair dryer that reduces the heating of the barrel by using a coaxial cold-air conduit to prevent the user from being burned and Thaler '331 could be similarly improved by having a similar barrel, thus better ensuring that the user is not burned by the barrel. Thaler '331 in view of Thaler '988 and further in view of Berryman discloses the claimed invention except for only. It would have been obvious to one having ordinary skill in the art at the time the invention was made to locate the single cold air combination switch (20, fig. 1) which is partially located on the housing (fig. 1) to be located only on the housing, for the purpose of providing more space on the first handle grip (11, fig. 1) for a more secure grip, since it has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japikse*, 86 USPQ 70.

#### **(10) Response to Argument**

##### **A. Rejection of Claims 13 and 10 under 35 U.S.C. § 102 (b) by Springer**

On page 16, line 2-page 23, line 5 Appellants argue that the wording “to prevent said second handle grip from getting hot during use” is a functional limitation that determines the extent to which the barrel portion is insulated from heat generated by the heater when it is operated. That according to the Advisory Action claims directed to an apparatus must be distinguished from the prior art by structure rather than function and that this is an out-of-context and somewhat misleading portion of the *In re Schreiber* decision because functional limitations at the point of novelty are acceptable in claims of all statutory classes and can be effective in distinguishing the claimed subject matter from the prior art. Appellants explain the case of *In re Schreiber* including that there was provided evidence of the inherency. Appellants argue that

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this situation is distinguishable from *In re Schreiber* because the Appellants' limitation is a structural limitation: the barrel is insulated sufficiently effectively so that the second handle grip does not get hot during use. That it is common knowledge that the barrel of a conventional hair dryer of the prior art will be heated when you turn on the heater because the user wants a stream of hot air and the hot air heats the barrel. That thus there is a real difference between the dryer of Springer and the Appellants' dryer. That Springer does not disclose any type of thermal insulation or thermally insulating material on any portion of the barrel. That the doors are not disclosed as having an insulating effect and that heat would also be conducted through the material of the barrel wall from the heater toward the outlet of the hair dryer so that the doors would have only a secondary effect in cooling the barrel wall downstream of the heater. That, furthermore the means for adjusting the position of the doors comprises a knob 111 mounted on the outside of the barrel portion which would interfere with a user who wanted to grip the barrel portion instead of the handle of the dryer of Springer. Also that Springer has a front flaring section that would be difficult to grip because of its sharp edges and awkward dimensions. That the disclosures in Thaler and Kaeriyama are not applicable as extrinsic evidence of inherency in the case of Springer, because they do not have the same barrel structure; they do not have the interfering knob 111 and interior doors 112 and 113 and that the barrels of Thaler and Kaeriyama do not have the preferred rectangular cross-section and flaring barrel shape required by Springer. Furthermore, that there is no intrinsic evidence in Springer that suggests that the barrel portion could be configured as a second handle grip that is insulated so that the heater will not heat it so that it is hot during operation of the heater. Appellants assert that it is thus unreasonable to read on the limitation that the barrel portion of Springer is embodied as an insulated handle grip that

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is sufficiently insulated so that it does not get hot when the heater is operated. That with respect to giving limitations "little patentable weight" during examination it is well to remember that the Office requires that all limitations of a claim be given patentable weight, even indefinite limitations, during examinations and that it is difficult to understand how limiting wording can be given variable patentable weight; wording or phrases in a claim either limit the claim scope or not and, if not, reasons should be provided that the wording has no patentable weight.

In response to Appellants' arguments, it is noted that nowhere do the Appellants assert that the barrel of a conventional hair dryer actually gets so hot during use that a user cannot hold the barrel portion. The claims merely state that the barrel portion is insulated from the heater to prevent it from getting hot during use. Additionally, the claims do not state by what structure this is achieved. Springer discloses a generally conventional hair dryer which includes a number of features which would inherently provide some insulating effect. As shown in figure 2 of Springer doors 112 and 113 are provided which would inherently insulate the barrel portion 110 from the heater 116 to some degree. Having the heating elements 120 of the heater 116 spaced from the barrel portion 110 would also inherently provide an insulating effect. And, the barrel portion 110 walls having a thickness would also inherently provide an insulating effect. Thus, the barrel portion of Springer would inherently be insulated to some degree from the heater. Furthermore, the assertion that the barrel portion of the Springer hair dryer would be too hot to hold is strongly contradicted by Thaler '331 at col. 1, lines 23-32 (see also fig. 4) and Kaeriyama at page 3, line 9-page 4, line 14 (see also fig. 2) which explicitly disclose that it is known that users sometimes prefer to, and do, hold conventional hair dryers by the barrel. Thaler '331 and Kaeriyama are relevant to whether the barrel portion of Springer could inherently be used as a

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second handle grip because the references are extrinsic evidence that make clear that the missing descriptive matter is necessarily present in the hair dryer described in Springer and that it would be so recognized by persons of ordinary skill. Accordingly, the burden shifted to the Appellants to show an unobvious difference, which Appellants have failed to do. Clearly, if the conventional hair dryer, which includes Springer, can be used while holding the barrel as a second handle without it getting hot during use due to the inherent insulating effect of the structure, there is no novelty in the functional limitation “to prevent said second handle grip from getting hot during use”. A simple glance at the figures of Sharp shows that a user of the hair dryer would not be prevented from holding the hair dryer by the knob nor by the edges of the barrel, which are shown to be rounded edges in figure 4. Obviously, the mere fact that Thaler and Kaeriyama have different shapes to their barrels, and that Springer has an additional knob and interior doors, does not render the references inapplicable as extrinsic evidence of inherency in the case of Springer, where the references provide evidence as to how conventional hair dryers can be used and Springer is substantially a conventional hair dryer. Thus, it is perfectly reasonable to read on the limitation that the barrel portion of Springer is embodied as an insulated handle grip that is sufficiently insulated so that it does not get hot when operated. It is additionally noted that “during use” would include when the hair dryer is operated with the cold air combination switch activated such that the heating element would be deactivated and no heat would be generated, further ensuring that the hair dryer barrel would not get hot during use. Finally, all the limitations were given patentable weight, as thoroughly detailed in the Office action, and the Examiner merely tried to highlight for Appellants that the apparatus claim limitations read on the prior art and the prior art is capable of performing the functional

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language. As stated in MPEP 2114, it is the case that "claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function." In re Schreiber, 128 F.3d 1473, 1477-78. Accordingly, "to prevent said second handle grip (9) from getting hot during use" does little to distinguish from the prior art which inherently provides insulation.

On page 23, line 6-page 24, line 19 Appellants argue that the claim limitations include that the cold air combination switch be configured to be actuated selectively from the first or second handle grip by direct contact between the cold air combination switch and one finger of a hand on either the first handle grip or the second handle grip. That if a hand gripped the barrel 110 of the hair dryer of Springer on the barrel portion, the switch 117 would not be accessible to one of the fingers of the gripping hand without releasing the grip of the hand on the barrel because of the shoulder on which the switch 117 is mounted and the direction in which the button on switch 117 must be pressed. That this is in contrast to Appellants' figures 6 to 9. That Thaler '331 specifically points out the problem with the placement of the switches that control the dryer in situations where the user grips the dryer by the barrel or barrel portion. Finally, that in the case of switch 117 one must either operate the switch from the hand gripping handle 119 or one must use the hand that is not gripping the barrel to operate the switch 117 because of the vertical orientation of the button of the switch (which requires a vertical pressing force) and the location of the switch in the housing between the handle and the barrel, since a shoulder of the housing would block access of a finger of the hand gripping the barrel.

In response to Appellants' arguments, hair dryers, including that of Springer, are generally relatively small apparatuses which are designed specifically to be easily maneuverable by hand. Looking to figure 1 of Springer, it seems readily apparent that a user could manipulate

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switch 117 using a finger, such as a thumb or index finger, while holding onto the hair dryer by the barrel using the same hand. Appellants' provide no support for the assertion that the switch 117 would not be accessible to a finger of a gripping hand having a grip on the barrel.

Furthermore, the claims state that the switch is on the housing between the first and second handle grips, which is disclosed by Springer, and therefore, the structural limitations are disclosed, and Appellant's have not shown any part of Springer that would make it impossible to operate that hair dryer in a way similar to the claimed hair dryer.

**B. Rejection of Claim 11 under 35 U.S.C. § 103 (a) based on Springer and Gallone**

On page 25, line 1-page 29, line 6, Appellants argue that a toggle switch is defined as an electric switch operated by pushing a projecting lever through a small arc. That this term toggle switch is distinguishable from a switch with push buttons and that the latter push button switch is the only switch disclosed by Gallone. That a toggle switch is easier to operate than the push buttons of Springer (Note: Springer clearly has a toggle switch 117 and not a push button) which are oriented in the wrong direction for the finger of a gripping hand so that they are not easily operated by a single finger that would approach the switch from the side. That Gallone only discloses a water-splash protected electric switch with two push buttons and that the elements 15 are transmission elements for transmitting the force applied to the push buttons. That second, Gallone teaches nothing regarding a hair dryer structure, because Gallone only discloses the water-splash protected electric switch. Further, that Gallone cannot cure the deficiencies of Springer discussed above. That there is no motivation to combine the references. That references should not be combined when they teach away from the claimed invention. That it

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should be apparent that the combined subject matter provides unusual and unexpected benefits compared to the combined prior art.

In response to Appellants' arguments, Gallone satisfies the definition of a toggle switch because the "rocking element 19" of the electric switch is a projecting lever that is pushed by the push buttons through a small arc. It is unclear why Appellants' assert that Springer discloses push buttons as Springer clearly shows a toggle switch 117. It is not necessary for Gallone to disclose a hair dryer. There are no deficiencies with regard to the independent claim for Gallone to cure. Finally, the Office action articulated the strong motivation of providing a water-splash protected electric switch that can establish or break continuity between contacts within the switch casing. Further, it was explained that one would be motivated to combine Springer with Gallone because Gallone teaches a two-legged toggle switch that provides a water-splash protected switch and Springer could be similarly improved by simply substituting its toggle switch for a two-legged toggle switch that provides a water-splash protected switch, thus preventing the user from electrical shock by the switch if water, for example from a sink, is splashed onto the switch. Users of hair dryers are commonly near a sink and generally have wet hair. A switch that protects from water-splash in such scenarios would have been obvious to one of ordinary skill in the art and the combination makes the claimed invention unpatentable over the prior art. Therefore, hair dryers are typically used near water and a switch that provides protection against water splashes from a sink, a user's hair, or a user's wet hands to prevent electrical shock to the user provides reasonable motivation achievable by simply substituting one toggle switch for another toggle switch.

**C. Rejection of Claims 13, 3-6, and 9 under 35 U.S.C. § 103 (a)**



On page 29, line 7-page 35, line 11, Appellants argue that the references, neither alone nor in combination, teach or suggest a single cold air combination switch configured to be actuated selectively from the first or second handle grip by direct contact between the single switch and one finger of a hand on either the first or second handle grip. That the rejection in the final action relies upon Thaler '331 as teaching a hair dryer comprising such a cold air combination switch. Appellants argue that Thaler '331 explicitly teaches that their hair dryers have two switches to control air flow rate or temperature in their summary of the invention. That Thaler '331 states that the hair dryer of fig. 1 has two switches, a simple trigger switch 20 and a mechanically operable (pivotable) switch 21, 23, 24. Appellants then argue that the term "switch" in claim 13 must be given its broadest possible interpretation, that a switch may be entirely mechanical in nature (such as a railroad track switch), and hence the interpretation of elements 21, 23, and 24 as a mechanical switch for operating the trigger switch 20 should be given weight in these arguments. Appellants then argue figure 5, which the Examiner notes is an entirely different embodiment which is not relevant to the rejection. Appellants' argue that claim 13 does not merely exclude two separately electrically-wired switches for cold air flow, but excludes any two switches for controlling air flow, whether they are electrically-wired separately or not. Appellants then argue that Thaler '331 teaches that it has a mechanical switch to assist with operating the switch for temperature while operating the hair dryer from the barrel portion. Appellants request that if the rejection is maintained, that the Examiner articulate how Thaler '331 can be interpreted as teaching a single cold-air combination switch in view of Thaler's explicit teaching to the contrary in column 1 and claim 1. That the invention recited in claim 13 is structurally different from the dryer taught by Thaler '331 because Thaler '331 always requires

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two cold air combination switches and claim 13 recites a (i.e. single) cold air combination switch configured in such a way that a second mechanical cold air switch is not needed. That one skilled in the art could not reasonably interpret claim 13 as encompassing a dryer comprising two cold air combination switches, because the claim recites a single cold air combination switch. That neither Thaler '988 nor Kaeriyama teach or suggest the claim limitation of a single cold air combination switch configured to be actuated selectively from the first or second handle grip by direct contact of the switch with one finger of a hand on either the first or second handle grip. Finally, Appellants argue that Thaler '331 teaches the opposite from the claimed invention, because they require that their claimed hair dryer have two cold air flow controlling switching mechanisms.

In response to Appellants arguments, the Examiner reasserts that Thaler '331 discloses a single electrically-wired cold air combination switch presently capable of being actuated selectively from the first or second handle grip by direct contact between the single switch and one finger of a hand on either the first or second handle grip. While Thaler '331 discloses a mechanically operable (pivotable) switch 21, 23, 24, that does not change the fact that both Thaler '331 and Appellants' claimed invention have a single electrically-wired cold air combination switch located on the housing between the handle and the barrel and capable of performing the functional language. Giving claim limitations their broadest reasonable interpretation does not just mean that the term "switch" is interpreted as being entirely mechanical in nature (such as a railroad track switch). It also means that if the term "switch" in the context of an electric hair dryer might also be reasonably interpreted as being directed only to an electrically wired switch, that the Examiner has also applied that reasonable interpretation.

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While claim 13 might be interpreted to exclude two separately electrically-wired switches for cold air flow, that would not necessarily mean that it excludes any two switches for controlling air flow, whether they are electrically-wired separately or not. The Examiner has articulated above how Thaler '331 can be interpreted as disclosing a single cold-air combination switch in view of Thaler '331's additional mechanical means for actuating the single electrically-wired cold air combination switch. Even if the invention recited in present claim 13 provides an altogether different solution to the same ergonomic problem addressed by Thaler '331, such an argument is moot when the claimed apparatus and the prior art apparatus are substantially the same such that the prior art apparatus is presently capable of being used in the way claimed. In this case, Thaler '331 discloses a hair dryer comprising a single electrically-wired cold air combination switch presently capable of being actuated by a single finger of a hand holding the dryer by either the barrel or the handle. The Examiner further notes that the limitation of a single cold air combination switch could reasonably be treated much like a limitation of at least one cold air combination switch, as the limitation does not explicitly exclude more than one cold air combination but rather requires that there at least be a single cold air combination switch. Therefore, one skilled in the art could reasonably interpret claim 13 as encompassing a dryer comprising two cold air combination switches (i.e. having at least one single cold air combination switch), because the claim recites a single cold air combination switch. Neither Thaler '988 nor Kaeriyama are needed to teach or suggest the claim limitation of a single cold air combination switch configured to be actuated selectively from the first or second handle grip by direct contact of the switch with one finger of a hand on either the first or second handle grip because Thaler '331 already discloses that limitation. Finally, as explained above, Thaler '331

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discloses a single electrically-wired cold air combination switch and therefore does not teach the opposite from the claimed invention.

**D. Rejection of Claim 10 under 35 U.S.C. § 103 (a) over Thaler '331,  
in view of Thaler '988, Kaeriyama, and Paulhus, et al**

On page 35, line 12-page 38, line 16 Appellants argue that while Paulhus does teach a switch that is a toggle switch for turning the heater on and off, it is located on the side of the housing, not at the angle between the first handle grip and the barrel. That the combined subject matter of Paulhus and the references used to reject claim 13 as obvious do not directly result in the combined subject matter of Appellants' claims 13 and 10. That one must modify the combined subject matter of the prior art by replacing the cold air trigger switch of Thaler '331 by the toggle switch 20 of Paulhus. That there is no hint or suggestion of that modification in the prior art and hence the use of a toggle switch for appellants' single cold air flow switch is not obvious, especially in view of the benefits it provides for operation by a hand gripping the barrel and also a hand gripping the conventional handle of the dryer. That the issue is whether or not the combined subject matter of claims 10 and 13 are obvious, not whether toggle switches are obvious switches to use in electrical devices. That furthermore it should be apparent that the combined subject matter provides unusual and unexpected benefits in comparison to the combined prior art.

In response to Appellants' arguments, Paulhus teaches that it is known to use a toggle switch for controlling the heater of a hair dryer and one would be motivated to use such a switch because it can turn the heater on or off without having to be held in place by the operator. The benefits of such a configuration are known and obvious. The modification merely involves

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simply substituting the push button switch at the housing of the hair dryer for a toggle switch.

As explained above, the limitations of claim 13 are addressed by the rejection and as explained here the use of a toggle switch for hair dryers for controlling the heater is known and has motivation.

**E. Rejection of Claim 11 under 35 U.S.C. § 103 (a) over Thaler '331, in view of Thaler '988, Kaeriyama, and Gallone**

On page 38, line 17-page 42, line 18, Appellants argue that a toggle switch is defined as an electric switch operated by pushing a projecting lever through a small arc. That this term toggle switch is distinguishable from a switch with push buttons and that the latter push button switch is the only switch disclosed by Gallone. Appellants mention Springer, however, Springer is irrelevant to the rejection over Thaler '331, in view of Thaler '988, Kaeriyama, and Gallone. That Gallone only discloses a water-splash protected electric switch with two push buttons and that the elements 15 are transmission elements for transmitting the force applied to the push buttons. That second, Gallone teaches nothing regarding a hair dryer structure, because Gallone only discloses the water-splash protected electric switch. Further, that Gallone cannot cure the deficiencies of the prior art discussed above. That there is no motivation to combine the references. That references should not be combined when they teach away from the claimed invention. That it should be apparent that the combined subject matter provides unusual and unexpected benefits compared to the combined prior art.

In response to Appellants' arguments, Gallone satisfies the definition of a toggle switch because the “rocking element 19” of the electric switch is a projecting lever that is pushed by the push buttons through a small arc. It is not necessary for Gallone to disclose a hair dryer. There

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are no deficiencies with regard to the independent claim for Gallone to cure. Finally, the Office action articulated the strong motivation of providing a water-splash protected electric switch that can establish or break continuity between contacts within the switch casing. Further, it was explained that one would be motivated to combine Thaler '311 with Gallone because Gallone teaches a two-legged toggle switch that provides a water-splash protected switch and Thaler '311 could be similarly improved by simply substituting its switch for a two-legged toggle switch that provides a water-splash protected switch, thus preventing the user from electrical shock by the switch if water, for example from a sink, is splashed onto the switch. Users of hair dryers are commonly near a sink and generally have wet hair. A switch that protects from water-splash in such scenarios would have been obvious to one of ordinary skill in the art and the combination makes the claimed invention unpatentable over the prior art. Therefore, hair dryers are typically used near water and a switch that provides protection against water splashes from a sink, a user's hair, or a user's wet hands to prevent electrical shock to the user provides reasonable motivation achievable by simply substituting one switch for another switch.

**F. Rejection of Claim 12 under 35 U.S.C. § 103 (a) over Thaler '331, in view of Thaler '988, Kaeriyama, and Berryman**

On page 43, line 1-page 45, line 2 Appellants argue that while Berryman does disclose a barrel structure with concentric tubes in a similar apparatus to a hair dryer that is similar to the barrel structure according to claim 12, the rejection of claim 12 does not include the limitations of independent claim 13 from which it depends as discussed above. That thus claim 12 is not prima facie obvious from the combined prior art references, Thaler '331, Thaler '988, Kaeriyama,

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and Berryman, for the same reasons as presented in section C above, since the hair dryer of Berryman does not have the limitations of claim 13.

In response to Appellants arguments, as discussed above in section C, the limitations of independent claim 13 were addressed by the references. Additionally, as acknowledged by Appellants, Berryman is relevant prior art which teaches the barrel structure of claim 12.

**G. Rejection of Claim 14 under 35 U.S.C. § 103 (a) over Thaler '331, in view of Thaler '988 and Berryman**

On page 45, line 3-page 46, line 19 Appellants argue that while Berryman does disclose a barrel structure with concentric tubes in a similar apparatus to a hair dryer that is similar to the barrel structure according to claim 14, that the rejection of claim 14 does not include a single cold air combination switch located only on the housing portion and configured to be actuated selectively from the first or second handle grips. That thus the claim is not prima facie obvious from the combined prior art references for substantially the same reasons as presented in section C above, since the hair dryer of Berryman does not have these limitations.

In response to Appellants arguments, as discussed above in section C, the limitations were addressed by the references. Additionally, as acknowledged by Appellants, Berryman is relevant prior art which teaches the barrel structure.

**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

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/Corey J Hall/

Examiner, Art Unit 3743

Conferees:

/Kenneth B Rinehart/

Supervisory Patent Examiner, Art Unit 3743

/Robin O. Evans/

Supervisory Patent Examiner, Art Unit 3700